

An Essay ad eund of
on the Boudoin
Caesarian Operation;
submitted to the
Medical Faculty
of the
University of Pennsylvania
as an
Inaugural Thesis
for obtaining the degree of
Doctor of Medicine.

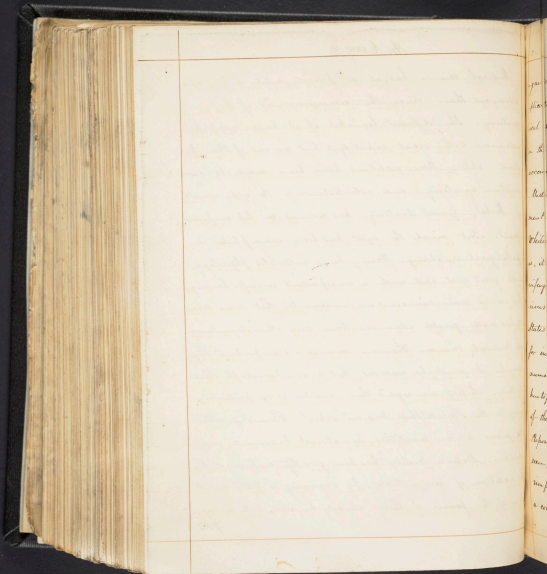
1829

By Israel Bailey Bradley
of Maine.

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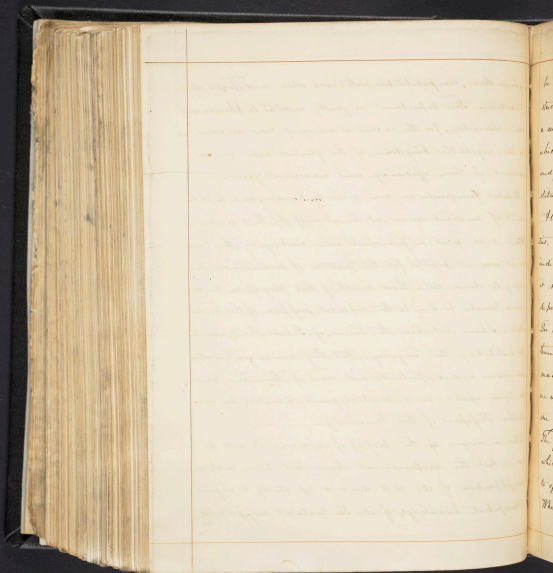
Medical science has, at no period, made more rapid advances than since the commencement of the present century. The different branches of it have not, perhaps, advanced with equal rapidity; but no one of them has stood still. Some additions have been made to descriptive anatomy; and, notwithstanding, the achievements of Bichat, General Anatomy has received no less improvement. But much the most has been accomplished in pathological anatomy. Many have cultivated physiology with great zeal and with a correspondent success. Surgery has received such numerous improvements, that some suppose it has made greater advances than any other department of medical science. However numerous & important they may be, it must be conceded, that a very honourable share of them, whether we regard their number or importance, belong to the Philadelphia Medical school. Chemistry, within the period above mentioned, has almost become a new science. Materia Medica has been greatly improved, by the addition of new articles, by acquiring a better knowledge of the powers of those already in use, both as re-
gards



-guards their compatibilities with each other, and ^{their} proper application. This department is greatly indebted to pharmaceutical Chemistry, for the recent discovery of some remedies in the vegetable kingdom, of the greatest value on ~~an~~ account of their efficiency and convenient form.

Medical Jurisprudence was scarcely known, as a department of medical science, at the close of the last century. While such great improvements were making in other branches, it was not possible for the practice of medicine and this ^{to} stand still. How much of this progress in the various branches is due to the medical professors of the United States, I have not now the time, if I had the materials, for instituting the inquiry. But they are unquestionably numerous and important, and some of them have been hitherto spoken in a most elegant manner by one of the Professors of this University.

Upon a review of the progress of medicine it will be seen, that the improvements have not been such a simplification of it, as to demand less study to acquire a competent knowledge of it. The treatment may, perhaps,



be regarded as more simple and more extensive; but the study of structure and function has of late assumed a relative importance, and demanded an attention, ~~it~~ which it did not before claim. A knowledge of structure and function, and of chemical laws and phenomena, constitute the groundwork and the frame of medical erudition.

Although it may be convenient, in populous communities, so far to divide the practice of the healing art; that individuals may devote themselves to a particular branch, it must steadily be kept in view, that there is a mutual dependance among all the branches of medical science. The medical practitioner, who is ignorant of any one of them, will often find himself in the predicament of a mathematician, who is desirous of ^{some unknown quantity} finding, but whose efforts are unavailing for the want of some apparently trivial known one or datum.

The foregoing remarks have been suggested by the subject, which I have selected for the Thesis, which I am about to offer, with much diffidence, for your acceptance.

When it is considered, that Medicine has so often been

regarded as an ignoble art, and abandoned to old women, the idea might present itself that one of its operations, the most infrequently performed, would present few, or no interesting points for discussion. But notwithstanding these considerations, it seems to me that the Cæsarian Operation presents some topics of the greatest interest, with respect both to structure and function.

Perhaps it is not easy to explain why so many surgeons feel a reluctance to interfere in those cases, when the patient lies between life and death, when, without their timely interference, death is inevitable, while with it there is a possibility, I might say probability, of recovery. Although this operation is very rarely necessary, there are cases occurring in our country every year, in which one and possibly two lives might be preserved by resorting to it; and if we can assign any reason, why there is hardly a physician or Surgeon in the United States, who does not neglect to resort to it, when he is convinced there is no other resource left him to save the life of either mother or child, must it not be ascribed

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to the circumstance, that British writers have been, until lately, the only authorities referred to by a great mass of the Surgeons and Physicians of this country?

If this be the case, it ceases to be a matter of surprise, that this operation should never be attempted, where we are told by one of these writers, that this operation is "inevitable destruction to the woman" and by another, which has been, until recently, the principal textbook of this country, that "every woman, for whom the Caesarian operation can be proposed to be performed, will probably die; and should any one survive, her recovery might be considered as an escape, rather than a recovery to be expected" and then to see these opinions sustained by the success of the British operators. There is not one of our country

Physicians or surgeons, who, deprived of the benefit of numerous and able counsellors, and with such opinions and not ill success staring him in the face, would not consider it rashness in him to undertake that, in which so many have failed. He would probably sooner attempt to tear away the foetus piecemeal (as has been done) with the imminent

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hazard of destroying the mother also. The works of our own authors are, however, obtaining a greater circulation, and the propriety, danger, and success of this operation will be received in its true light.

The necessity of the Caesarian operation arises principally from extreme deformity of the pelvis caused by Rickets, ^{or} Malacosteon, and may also be rendered necessary by costosis, and by tumours occupying the cavity of the pelvis. For a full exposition of these causes, see Barrow's Midwifery, p. 28. Samuel's Barrow p. 30 and Francis's Barman p. 221.

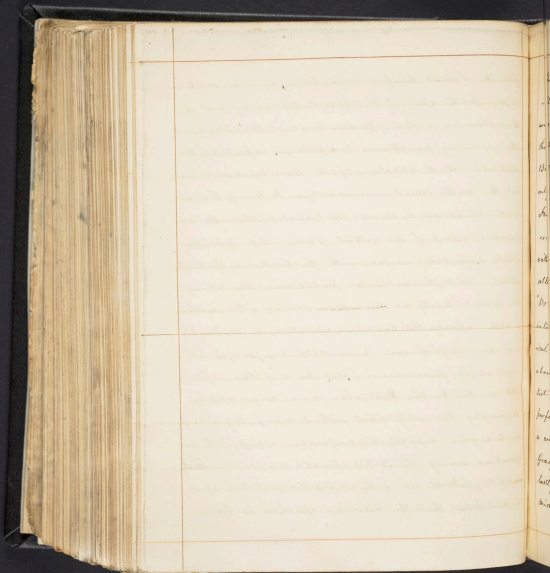
Authors do not agree as to the extent of deformity requiring this operation. Dr. Samuel says "it must, to a certain extent, be modified by the dexterity of the operator". Dr. Barrow lays it down as an axiom, that the child cannot be delivered by the crutch, when the short diameter of the pelvis is less than one inch and three quarters, and the long fully three inches, and he admits that it is questionable, whether, in this extreme degree of deformity, the Caesarian operation would not be attended with less danger to the mother. Dr. Barrow considers it impossible to deliver by the crutch.

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when the antero-posterior diameter is less than two inches,
and the transverse less than three and a half; and thinks
that the employment of the extract, when the antero post-
er diameter is less than two and a half inches, is as haz-
ardous to the mother as the Caesarian operation; yet, were
the child dead, he would employ the extract. But even
were the child dead, and the antero posterior diameter
less than two inches, he would be in favour of the Cae-
sarian operation. Dr Dewees then discusses the question
"in those extreme cases of deformity, which require the use
of the extract for their termination, by which of the two op-
erations the patient and society will be most benefited".
After deliberately considering all the points, the inevitable
destruction of the child by the one, the comparative danger
of both to the mother; together with the uncertainty of be-
ing able to deliver the child by the extract after it is dis-
tended, and successfully, as I think, combating all the
arguments against the Caesarian operation, he decides
in favour of it. I should do injustice to this argument
of Dr Dewees, should I attempt to make an abstract
from

from it. I must, therefore, refer the reader to his work
(1837). In this opinion Dr. Keen is supported by most of
the continental authors. Gardien mentions, that Boyer and
other judicious practitioners had witnessed repeatedly the
mutilation and extraction of the child by eminent men,
but the mother sunk immediately. In two of these ca-
ses the uterus was ruptured. But what has been the com-
parative success of the crutch, (I mean where it is im-
piously demanded) compared with the Caesarian operation?
If we refer to the continental practitioners, they tell us
the crutch hardly ever succeeds in saving either mother
or child, whereas the Caesarian operation, in considerably
more than half the cases, preserves both lives, and, in al-
most all, it preserves one. I have heard of three or four
cases in the Eastern States, where it was deemed necessary
to employ the crutch, but without success. It is unne-
cessary to enquire respecting the comparative success of the two
operations among the British practitioners, as it is ^{hardly} ~~utterly~~
possible, that the use of the crutch or guillotine should
be more fatal than the Caesarian operation has been.



Speaking of the success of this operation, a writer in Johnson's Medical Chirurgical Review (Vol. II. New Series P. 475.) says, "Klein, who was a very industrious physician and careful compiler, found that of eighty-two Caesarian operations, performed between 1300 and 1769, the period in which the lateral operation prevailed, only six proved fatal, or one case in every thirteen and a third. In this country, the success has been very little, and if we except Mr. Barclay's case of Cholera, we are not acquainted with one, which terminated in the preservation of the mother, although the operation has been performed eighteen times." "Dr. Keilie, who published ~~who published~~ the result of his enquiries into the mortality of this operation, in Vol. V. of the Edinburgh Medical and Surgical Journal, found that, out of 291 cases scattered about in the records of Surgery, 139 were said to have terminated successfully. The operation has, during the year 1828, been performed in Germany three with success; once by Dr. Schenk, a condensed history of which case is subjoined; once by Professor Graefe, a surgeon of great enterprise and talent at Berlin; and lastly, by Menck the successor of Oslander and Professor of Midwifery at Göttingen. The two last cases are not yet ^{published}

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published; they will be inserted in the next number of this Journal. Within the same period, the histories of six unfortunate cases have made their appearance, three in Sabote's Journal für Geburtshülfe, &c. and three in Mencl's Obstetric Journal, which have a very favourable quotient on the successful side. If we take the number of unfortunate cases that are published, and allow half that number for the cases not published, and then compare these with the successful cases, which we may be certain always make their appearance, we shall find the proportion of the fortunate to the unfortunate will be about one in ten. Such is the result of a careful examination of the published documents up to the present time, and of many extended enquiries, which we have instituted on this subject.

Now I am at a loss to know by what method of mathematical calculation the writer arrived at this result. Applying his rule to the 3 successful and 6 unsuccessful cases I should make the proportion of the fortunate to the unfortunate, 1 in 4, and taking the 231 cases mentioned, as 5 to 3. In the 82 cases collected by Klein as 9 and 3 to 1,
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and I have been able to collect from the various journals published since the year 1817, 26 successful cases, one of which was self-performed where there were twins; another where mother and twins were saved, and in one patient the operation was performed twice successfully. Within the same period, I find 3 unsuccessful cases. The fatal result of one of these is ascribed to the operation being delayed for five days from the commencement of labour, by which, according to the operator, (Dr Seidler) "the powers of the mother were exhausted; which prevented the uterus from contracting reasonably, and thence resulted sanguinous effusion into the abdomen". If I am correct in this collection, it will give the ratio of fortunate to the unfortunate as 6 to 1.

Now can it be denied, that this success is as great or greater than in many other capital operations? Is it not far greater than delivery by the cruet? We are not half as successful in fractures of the cranium, where it is necessary to trephine, yet no surgeon of any tact, or decision, hesitates to perform this last when necessary. And why? because it

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is an established operation. It is one of acknowledged ~~re-~~
~~ceptibility~~ necessary to preserve, I might say to restore, the life of
the patient. But I may ask, is not the patient, who de-
mands the use of the craniotome or the Caesarian operation
in as precarious a situation, as the one with the de-
pressed cranium? And is not the chance of recovery
from the first at least as probable as from the second?
Professor Gibson once observed, in conversation, that it was
not likely more than one in ten recovered from fracture
of the cranium, where it is necessary to trephine. If, upon
careful inquiry, this should be found to be the fact, I
cannot conceive why the Caesarian section should not
be considered as an established operation, as well as the
other, since it is evidently more successful. Furthermore,
perhaps we may rate the success of the Caesarian operation
higher than we have done, for it does not seem to me
probable, that a number equal to one half of the un-
successful cases reported, would be withheld from the
public; because the operation has been considered so
appalling and fatal, that any surgeon, who performed
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sufficient skill and resolution to prompt him to undertake it; would give it to the publick whether successful or otherwise.

As the necessity of resorting to this terrible operation is so justly dreaded, I shall make some remarks upon the danger attending it. The hazard of it is alleged to consist, first, in the danger of peritoneal inflammation, and secondly in the danger of hemorrhage from the divided arterial vessels. Thirdly, the pain and suffering, induced by it is supposed by some to be greater than human nature can sustain. That the danger from peritoneal inflammation is ^{great} indisputable, but that ^{it} is as formidable as many surgeons have imagined or is always fatal, is not so evident.

If the inflammation in a part, very susceptible to it, has a tendency to spread itself, the danger from a small wound would be as great as from a larger, and the wound from the trocar in paracentesis would be as dangerous as ~~from~~ a larger incision. On the other hand, if there be no such tendency, it cannot be ^{supposed}.

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supposed, that the inflammation, confined to the edges of a smooth incisal wound six or eight inches in length, would be fatal, provided we made use of the best means in our power to prevent or subdue it. From this it seems to me very apparent, that the danger of wounds of a serous membrane is not always proportioned to their extent.

Peritoneal inflammation presents such an extensive field for discussion, that I cannot, in this place, pretend to enter into it with any minuteness. But I would observe, in the first place, that ^{simple incised} wounds of this membrane, without any complications, are much less dangerous, than they have usually been considered. It must be admitted, that they are seldom unattended with danger, and are often fatal. But the danger and fatality are not usually the direct effects of the wound, but they result from the irritation of some foreign body, which gains access to this membrane through the wound. In wounds of the viscera abdomen some of its viscera are very apt to be wounded and to discharge their contents into the cavity of the peritoneum. If these viscera are not wounded, the chief danger will arise

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arise from the admission of atmospheric air into such wounds. The muscles of the abdomen maintain such a constant pressure upon the abdominal viscera, that there is little probability, that air will, to any considerable extent, gain admission into the peritoneal cavity, but that it may, under some circumstances, can not be doubted.

And it is equally certain, ^{that} the long continued admission of atmospheric air will derange the functions of any part, which is not protected by cuticle. Irritation often will, indeed, often spread from an external wound by continuous sympathy to the peritoneum; but it is usually, when the wound is suffered to remain open. This view might be illustrated by cases, and it is corroborated by the doctrine of Mr. Abernethy on the treatment of large abscesses.

Upon this point a writer in the North American Medical and Surgical Journal Vol. I. P. 172, says, The experiments referred to above, prove, in conjunction with other facts, that the directly stimulating effects of atmospheric air, which contains but a certain portion of oxygen, are but trifling, and yet cannot wholly be denied by any one ^{who}

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who will, at intervals, expose the cutis denuded of the cuticle, or an inflamed burn, to the influence of the atmospheric air; but the great mischief caused by this fluid, arises from its conducting powers, by which heat and moisture are rapidly conveyed away from the surfaces, which are freely exposed to a current of air, and thus great irritative causes" Bichat says "if, they, (serous membranes) remain a short time exposed, ~~to~~ the air inflames them; the organic sensibility is transformed to that of relation. Every contact of a foreign body, not ^{becoming} only, perceptible, but painful to the animal". Again he says "Serous membranes, when they are exposed in a wound, as we see in portions of the intestines torn from the belly of an animal, soon grow cool, remain a long time at a low temperature, and do not acquire their ordinary warmth, till inflammation supervenes and restores their sensibility". For a full description of the effects of admitting atmospheric air to parts not defended by the cuticle, see an essay by Dr Bond, in 2^d Vol of Dr Shipman's Journal.

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It must then be admitted, from the preceding considerations, that a certain degree of heat and moisture is necessary for the safety of serous membranes; and that atmospheric air at a temperature equal to, or below, that of the human body will abstract from it both heat and moisture. These views I consider no longer hypothetical, but defensible on chemical and philosophical principles, and they are evidently of no small importance in reference to the Caesarian operation. If it be true, as I shall presently attempt to show, that patients seldom die of haemorrhage after this operation, the fatal result must be ascribed either to peritonitis or to constitutional irritation. Two questions here present themselves, first, How far is peritonitis, in these cases, dependant on the agency of atmospheric air? second if it does depend much upon this agency, what means shall be used to counteract it?

In reply to these questions, I would observe, that if peritonitis does arise from this cause, it must, ^{be} in a great measure, the fault of the operator. If he be tedious in the operation, and suffer the wound to be long exposed ^{and}

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and much handled, he will probably induce inflammation. If it do not attack the peritoneum primarily, the irritation of the wound may extend to this membrane by continuous sympathy. But there is good reason to believe, that the air can have but little agency in ~~producing~~ peritonitis, when the operation is performed in a proper manner and in a due time; and ~~that~~^{the reason} is, that the parts exposed within the wound will be protected from the air by the blood poured out by the divided vessels, added to the natural moisture of the parts. I apprehend that it will be found, upon further investigation, that the fatality of this operation depends much less upon any necessary danger in cutting into the uterus through the abdominal parietes, than upon constitutional and local irritation occasioned by delaying the operation until the patient was nearly or actually moribund, as is said to have been the fact in most of the operations performed in Great Britain.

The second objection, which is urged against the operation, is uterine haemorrhage. Not the least consideration, ^{would be paid to this objection} by those, who know any thing, of the success or fatality of

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of this operation, or who understood the structure and action of the uterus. This objection is put at rest by the very perspicuous and philosophical rationale of the action of the muscular fibres of the uterus by Dr Dewees in his system of midwifery p. 174. 176; because it must be evident, that, if the uterus be in a state of tonic contraction, the longitudinal fibres, which are the strongest, would more than resist the force exerted upon them by the circular fibres, which tend to retract the edges of the incision, and of course prevent all hæmorrhage by keeping the wound firmly closed. I am now supposing the incision to be made immediately under and in a line parallel to the *Linea alba*. Dr Dewees also says, (p. 234) "But little blood is lost when the uterus is cut in the centre of its anterior face, unless the placenta be attached there, and even then the discharge is ~~lost~~ ^{but short} if, ^{but short} continuance, if this organ contract forcibly". Two cases reported in the fourth volume of Johnson's Med. Chirurg. Review confirm the opinion, that there is nothing to be apprehended from hæmorrhage.

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The first was performed by Schenk of Frankfurt, Germany.
Speaking of the operation, he says, "by the second incision
by the ~~Q~~ which was made to perfect the division of the
abdominal parietes, the uterus was cut into, the vessels
which were divided, immediately contracted within
the structure of the uterus, so that the bleeding was
quite insignificant"; also that he made the incision in
the uterus between six and seven inches long and
cut through a portion of the placenta and yet no
artery spouted and only a few ounces of blood
were lost. The second case is by Dr. Meyer of Ulm in
Rupia. In this case the incision was made nearly
to six inches in length, from the upper part of the uterus
towards the neck; two thirds of the placenta ^{were} cut-
throughs and although "the vessels traversing it appeared
fightfully large" (to use his own words) no important haem-
orrhage followed. "Most interesting was it to observe (says Dr. M.)
at this moment, the sudden contraction of the uterus
which quickly diminished to the size of a large goose egg."

There are two other cases recorded in the same journal,
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where the operator says, "the haemorrhage was slight."

Dr. Wood of Manchester also made his incision through the uterus directly upon the placenta, ^{and} there was no haemorrhage of importance. There is sufficient proof, as I think, that the haemorrhage is the least danger we have to fear in performing the Caesarian operation. Of all the numerous cases reported I can find but one where the fatal result is ascribed to haemorrhages and as this comes from no less authority than Mr. Charles Bell, it is deserving of some attention.

"In making sections of the uterus while it retains its natural muscular contractions, he says, I have been much struck in observing, how entirely the bloodvessels were closed and invisible; and how open and distinct the bloodvessels became, when the same portions of the substance of the uterus were distended and relaxed. This fact of the natural contraction of the substance of the uterus closing the smallest pore of the vessels, so that no vessels are to be seen, when we nevertheless know they are large and numerous, demonstrates that
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a very principal effect of the muscular action of the womb is the constricting of the very numerous vessels, which supply the placenta, and which must be repleted when the placenta is separated from the womb".

—He also says, "On the outer surface and lateral part of the womb, the muscular fibres run with an appearance of irregularity among the larger bloodvessels; but they are well calculated to constrict the vessels whenever they shall be excited to contraction".

After giving this account of the muscularity of the uterus, and demonstrating, that a very principal effect of its muscular fibres is to compress the numerous vessels and sinuses, he proceeds to detail an account of the Caesarian operation performed by his brother Mr John Bell. "He states that, during the operation, no vessels were seen, nor any haemorrhage occurred; that the foetus was removed and the placenta thrown out by the action of the uterus, that for twenty minutes he compressed the abdomen and uterus between his hands, at the expiration of that time the incision of the integuments was closed.

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closed by sutures and adhesive straps, but "that happened which he foresaw would happen when he ceased to compress the uterus; viz. "a fatal hæmorrhage,"

Mr Bell then describes the appearances on dissection and says "he found the uterus lying, contracted, but the incision gaping, the lips everted and the vessels with open mouths, which during the operation were not apparent." "From the mouths of those vessels the streaming blood had been coagulated and lay in large cakes in the abdomen."

As Mr Bell admits one of the principal effects of the muscular action of the uterus to be to constrict its numerous vessels, so that we cannot see the minutest for, notwithstanding we know they are large and numerous, I would ask where could he see the necessity of compressing the uterus, and that, when this compression was suspended, a fatal hæmorrhage would ensue? He may urge, that it was to bring into contact "the edges of the incision, which were paralyzed and everted notwithstanding the tonic contraction of the uterus. To this it may

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may be replied, from his own premises, that if "the muscular fibres on the outer surface and lateral parts of the womb, which run with an appearance of irregularity among the larger bloodvessels, are well calculated to constrict these vessels, whenever they shall be excited to contraction", that it was of no consequence that the edges of the incision were excited and paralyzed, because the contraction of the said "muscular fibres" would prevent the blood, which comes from the spermatic and hypogastric arteries, from reaching the edges of the incision. In Dr. Meyer's case, above cited, the edges of the incision did not approximate, yet there was no hemorrhage and the patient recovered. From this I think we must draw one of two conclusions, viz. that either the operation of Mr. Bell was performed when the uterus was relaxed, or which is most probable, secondary hemorrhage ensued from relaxation, which might have been checked by exciting the tonic contraction of the uterus. See Denwood Midwifery p 584.

In this case it is not unlikely, that the patient
would

have died from the same cause, hæmorrhage, if the operation had not been performed and the delivery had been effected in some other way. As this is the only case, which I can find where the woman died from hæmorrhage, it seems the weight of testimony is against the danger from this source and we may say with Mr. Gottpfer, "that whatever arguments may be adduced, it is enough to say in this case; *Ante experientia fecit, exemplo monstrante viam*".

- The third ^{objection} is the great pain and suffering of the patient in the operation. To this it may be answered that experience does not justify this apprehension. In the cases of Drs. Shunk and Meyer (already quoted) and two others referred to, they say the pain given by the operation was not so much, as that caused by the introduction of the sutures; and in that of Dr. Meyer, he says "The patient complained very little of pain during the operation, and assured the operator and her friends afterwards, that of her severe labours, this had been the least painful." and the same patient ^{again}

again becoming pregnant, appeared to be rejoiced at the prospect of being again delivered in the same way.

This is not very surprising, as the peritoneum is not sensitive (according to Brochot) to any impression made upon it, until inflammation supervenes. It is the same with the linea alba. If sensibility of any part be at all dependant upon its supply of nerves, we must suppose, that the sensibility of the uterus, from its great increase in size, is less than it was previous to impregnation; and that the pain dependant on an incision into this organ would not be any greater than into any other muscular part. But in the history of all the cases, where we have a minute description of the operation, the operators concur in saying, that the pain is not great, and generally much less than delivery in the common way.

If then these views of the danger of the Caesarian operation be correct, we see that it is much less than it has been by many represented.

It may then be enquired, what is the cause of the
fatality

...again, becoming frequent, sufficient to be regarded as the
...of any more serious business in the same way.
...to be not only improving in the future, but also
...all (according to belief) to any improvement which would
...it with improvement in business, it is the same with
...the same after. It would be of any kind to be as
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fatality of the operation among British Surgeons? It may be applied to this inquiry, 1st that the British surgeons delayed to operate, until the efforts of the mother had brought on a predisposition to peritoneal inflammation, or had actually induced it. Dr Chapman thinks peritoneal inflammation may be produced by severe labours, for he says "Commonly I suspect, puerperal fever has its origin in inflammation of the uterus, produced by rudeness or violence in the delivery, which spreads more or less over the peritoneum, according to the vehemence of the attack, and the extent of the predisposition", see Chapman's Therapeutics, last edition p. 126. The same opinion respecting the failure of the operation with the British surgeons, is entertained by Dr Denon -

2^d They were probably equally backward in overcoming or preventing peritoneal inflammation by the use of the lancet.

See the selection of this subject for my Thesis, it was not my intention, even if the discussion of it had not already become so protracted, to describe the minutiae of this operation. But in conclusion I will state

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state some general principles, which seem to me natural-
ly deducible from what I have said in the foregoing page.
1st As it is not difficult to determine, without much delay,
in what cases the operation may be necessary, it should not
be deferred until the system becomes exhausted and irri-
table, and any wounded part is predisposed to take on
diseased action. After long continued and violent action
of the uterus and abdominal muscles, there would be a
greatly augmented danger of peritonitis. On the other hand
the operation should not be undertaken, even if its ne-
cessity be decided, until the uterus begins to act strongly.
In this case, the uterus will be more likely to contract so
as to preclude the danger of hæmorrhage. If the op-
eration be deferred until the patient is exhausted, in ad-
dition to the danger of inflammation, we shall encounter
the danger of hæmorrhage, as the uterus may be so
exhausted, as to remain relaxed after the removal of
the factors and secoundines. —

2^d As there is less danger from a claw incision, than
from the laceration, straining, and rude handling of a
part,

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part, the incision should be sufficiently large to allow the passage of the child without any violence to the parts through which it passes. If the incision be too small, it will increase both the danger and suffering of the patient.

3^d As every raw surface, and especially serous membranes are apt to suffer from exposure to a dry air, of a temperature differing much from their own, it would probably have some effect in lessening the danger of inflammation, to perform the operation in a room, whose temperature should be such, as not to be chilly to the naked body, and in air saturated by aqueous vapour.

Although this would not have a great influence upon the result of the operation, when performed with despatch, in ^{making} the proportion, I think I am supported by Dr. Baunce, who says, "attention should be paid to the smallest circumstance, if it contribute to render an operation of such consequence less fatal."

4th As the chief dangers to be dreaded in this operation are peritonitis and haemorrhage, in selecting the place.

place and mode of making the incision, we must keep these two dangers in view. We should aim to do the least possible violence to the peritoneum, and to avoid if possible cutting through the placenta and large uterine arteries. Two methods have been of late proposed for making the incision in such a manner, as to entirely avoid wounding the peritoneum. Mr. Baudeloque junior, in the *Journal Universel* for July 1824 has proposed a method, which has been called "a substitute for the Casarian section". The operation of Mr. Baudeloque has been pronounced, and it seems to me with justice, "difficult, complicated and impracticable". See Johnson's Review for April 1825. —

In Keener's midwifery, another method of performing this operation is proposed by Dr. Physick, which is much more simple, and, if the peritoneum can be stripped from the fundus of the bladder, as he proposes, must possess some decided advantages over every other mode of operating. The first advantage, (which is the only one claimed for it) is, that it thins the danger of peritonitis by avoiding the wounding of the peritoneum. A second advantage is, as it would seem to me,
that,

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that the incision is made through the uterus, where the
placenta is least apt to be attached, and where the prin-
cipal trunks of the uterine artery are least liable to be
encountered.

8th A rigid depletory and antiphlogistic treatment,
after the operation, are very obviously indicated.

